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Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor

Highlights

- ❑ new freeways provides substantial benefits to highway users
- ❑ benefits conveyed by freeway construction accrue to property owners in the form of aggregate increases in property values
- ❑ property value impacts vary among different types of properties
- ❑ eliminating the freeway will not necessarily create a substantial reduction in regional traffic
- ❑ freeway development did not deter the construction or sales of residential properties in the impact area
- ❑ home buyers in the freeway impact area had prior knowledge of the Superstition Freeway
- ❑ buyers of homes in the Superstition Freeway study area bear the responsibility for their investment returns
- ❑ local governments might improve the return generated by freeways through appropriate zoning decisions

Background

The rapid growth of the Phoenix-Mesa metropolitan area has necessitated the development of transportation facilities to accommodate related increases in population and vehicle traffic. Improvements to the metropolitan highway network have undergone a number of changes since the development of a regional freeway plan in the late 1960s.

The Superstition Freeway (US60), in the southeast region of the metropolitan area, services several of the fastest-growing communities in the valley, providing access from these locations to the wider region. Construction began on the Superstition Freeway in 1969, and was completed to Power Road in east Mesa in 1985. The freeway was originally built as a four-lane highway, and was widened to six lanes in 1984. Continued growth in southeast valley communities has led to the acceleration of new improvement projects. In 1996, the MAG Major Investment Study concluded that additional general use lanes and

freeway management systems would be needed on US60, along with high-occupancy vehicle (HOV) improvements, to accommodate projected growth and congestion levels in the Superstition Freeway corridor. Slated projects include the addition of new HOV and general travel lanes beginning in the summer of 2001.

Highway improvements have not always been met with favorable response from surrounding communities, and the Superstition Freeway is no exception. Recognizing that freeway development can have an impact on highway users and non-users alike, most opposition to freeway development has traditionally come from existing residential property owners. Although all highway benefits are derived from lower transportation costs, they can also be represented as changes in the real incomes (i.e. value of environmental amenities, safety, and other goods not normally provided in the marketplace) of individuals, which may in turn be capitalized into asset values such as the value of land. Property owners who oppose freeway development often feel that they will be adversely affected by environmental consequences of freeways (e.g. noise and air pollution) that may not be offset by their gains from lower transportation costs. Such perceptions recently drove community opposition in the city of Tempe, where residents sought to block additional improvements to US60 within city limits.

Approach

This research is intended to examine and, when appropriate, estimate the net impact of the Superstition Freeway on a sample of properties in the freeway corridor. Based on the results of previous research, this study has focused primarily on the distributional effects of freeway development. In other words, an attempt has been made to identify whether some groups of property owners are better off than

others due to freeway development. Few people would dispute that the construction of the Superstition Freeway opened up a new region to more intensive development, increasing aggregate property values for commercial and residential uses alike in the southeast valley. However, the overall effects of such development are difficult to quantify. Moreover, most resistance to freeway improvements comes from property owners who feel that they are not sharing in the benefits of the freeway to the extent that the costs associated with the transportation improvement are offset. Therefore, quantitative research has typically focused on measurable changes in land use or property valuation among subgroups of parcels stratified according to distance from the freeway or other measures of access. This study follows a similar approach.

Findings

Freeway development is typically associated with broad economic and land use impacts. In the aggregate, these tend to be positive, as the benefits of increased efficiency associated with transportation cost savings accrue to a broad range of highway users and non-users alike. However, the construction of a freeway can impose costs in the short-run (e.g. construction-related delays) and long-run (e.g. adverse effects of noise on adjacent property values) alike. Efforts to quantify the negative effects tend to focus on the perceived reduction in residential property values due to freeway-induced traffic noise and air pollution. Usually, attempts to quantify these effects have identified small, but statistically significant, adverse effects on residential properties in a limited impact area.

Most researchers agree that the net effects associated with freeway development are not directly comparable from one region to another. In studies with multiple samples, there

tended to be substantial variations in the magnitude and directions of freeway effects. Intrasite reactions generally demonstrated the strongest relationships, implying that the local setting plays a significant role in the overall impact of the freeway. Thus, generalizations among various locales may not be appropriate. However, these findings also imply that the degree to which local planning and oversight address the impact of freeways can potentially influence social and economic consequences at particular sites.

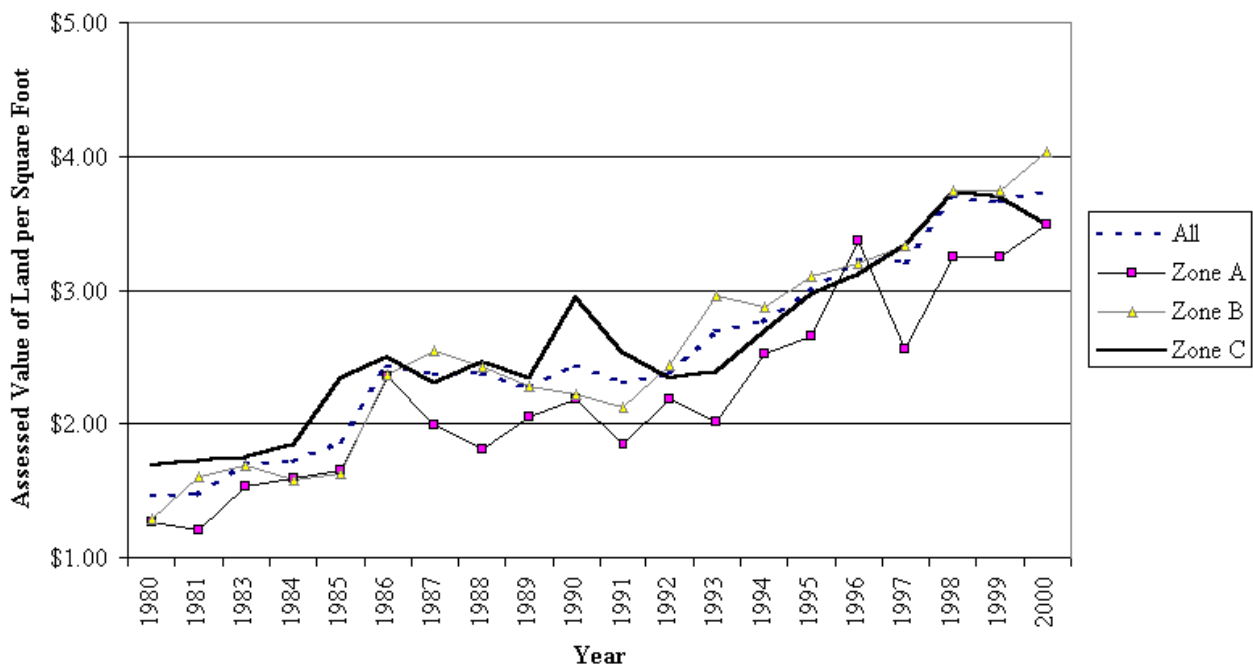
This report examined the multiple impacts on land use and property values associated with freeway development. Using the Superstition Freeway (US60) corridor in metropolitan Phoenix as a case study, the distributional effects of the freeway were illustrated for several subcategories of property types. Particular emphasis was placed on proximity to the Superstition Freeway as a possible determinant of property value changes. Among the findings were the following observations:

- Construction of new freeways provides substantial benefits to highway users, including reductions in travel time, increased access to outlying locations, and reductions in vehicle operating costs (e.g. greater fuel efficiency, fewer crashes).
- Access benefits conveyed by freeway construction accrue to property owners in the form of aggregate increases in property values. Freeway construction makes commercial and residential development more feasible in areas further from the central business district, as travel times are reduced between locations. This in turn makes these areas more attractive to developers, resulting in higher property values in the freeway corridor.
- Property value impacts vary among different types of properties and by distance from the freeway. In the US60 corridor, proximity to the freeway was observed to have an adverse effect on the sales prices of detached single-family residences, but was observed to have a positive impact on multifamily residential and some commercial properties. The net effect over the last 20 years indicates that properties immediately adjacent to the freeway (zone A) did not fare appreciably differently than other properties in the general vicinity (see Figure 9 below).
- The key factor in determining negative impacts of the US60 freeway appeared to be the level of traffic in the corridor. A negative effect on detached residential property values was also observed for major surface streets in the control area, indicating that increasing traffic volumes from the growing urban area were to blame for changes in residential property values. While opposition to highway transportation projects has traditionally focused on freeway development, a freeway is simply another conduit for traffic. Eliminating the freeway will not necessarily create a substantial reduction in regional traffic, and may spread the adverse impacts of traffic among a larger impact area.
- Most residential units in the study area were constructed after the Superstition Freeway alignment had been determined, and none of the homes in the impact area sample group were built prior to 1975. These observations indicated that, in the aggregate, freeway development did not deter the construction or sales of residential properties in the impact area. Furthermore, it may be assumed that home buyers in the freeway impact area had prior knowledge of the Superstition Freeway, as the freeway had

already been constructed to the Mesa city limits by 1975.

- While the evidence indicates that the purchase of a home adjacent to a freeway or any major street is not a good investment in most cases, buyers of homes in the Superstition Freeway study area had access to information regarding existing and pending corridor development, and thus bear the responsibility for their investment returns.
- Because freeways have been observed to have a positive impact on the value of certain types of properties, local governments might improve the return on investments generated by development in a freeway corridor through appropriate zoning decisions for the impact areas. A focus on higher densities and commercial development in the immediate vicinity of the Superstition Freeway may provide the greatest returns.

Figure 9: Average Assessed Value per Square Foot, Residential Land



The full report *Impact of Highways on Property Values: Case Study of Superstition Freeway Corridor* by Jason Carey (Arizona Department of Transportation, report number FHWA-AZ-01-516, published October 2001) is available from the Arizona Transportation Research Center, 206 S. 17 Ave., mail drop 075R, Phoenix, AZ 85007; phone 602-712-3138.